MINIMALLY INVASIVE MANAGEMENT OF ADULT PRIMARY OBSTRUCTIVE MEGAURETER WITH UROLITHIASIS

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Abstract:
A case of primary obstructive megaureter in an adult patient presenting with urolithiasis. The case was managed with minimally invasive procedures offering the patient lesser pain score, speedy return to daily routines. Key word: Primary Obstructive megaureter, PCNL, Laparoscopic ureteric reimplantation

INTRODUCTION:
Megaureter is any ureter that is dilated out of proportion to the rest of the urinary tract. Normally ureteral diameter is about 5 mm. Megaureter is ureter size more than 7-8 mm. Usually common on left side and bilateral in 25% cases, predominant in males. It is classified into three groups. Here in this case, Primary obstructive megaureter which presented with symptoms due to left renal calculus.

CASE REPORT:
A 39 yrs male presented with complaints of left loin pain --- 1 month duration which was constant, dull aching not radiating. There was no history of fever, vomiting, Dysuria, Calculuria, urolithiasis helping the patient to achieve faster recovery and success rate comparable to open procedures.

KEYWORDS:
Primary obstructive megaureter, Urolithiasis, Percutaneous nephrolithotomy, Laparoscopic ureteric reimplantation.
Pyuria, Haematuria and Lower urinary tract symptoms. There was no history of medical or surgical illness in the past or associated co-morbidities. On examination patient was afebrile, not pallor, pedal edema, lymphadenopathy. Cardiovascular system/Respiratory System/Per abdomen examination: Normal External genitalia: normal Investigations for this patient are as follows:
Ø Urine routine and complete blood count – within normal limits, Renal function test normal
Ø Urine Culture ---- no growth
Ø Ultrasound Kidney Ureter and Bladder: Left kidney: 1.5 cm calculus lower pole. Grade Pelvicalyceal dilatation. Right kidney: no stone or PCS dilatation, Left ureter: dilated, Right ureter: not dilated, Urinary bladder: no stone or growth

Intravenous Urogram: Left lower calyceal stone and Left Megaureter with Left Hydroureteronephrosis Grade IV

Xray KUB showed stone in left renal area

Voiding Cystourethrogram: No reflux noted in the left ureter. Hence a diagnosis of Left Obstructive primary megaureter with secondary left renal calculus was made.
Contrast enhanced CT scan: confirmed the diagnosis
Based on the above investigations illustrated, a diagnosis of Left primary Obstructive megaureter with secondary left renal calculus was made.

MANAGEMENT:
Ø Left Percutaneous Nephrolithotomy in first sitting – Ureteric catheter could not be placed due to obstructive segment in ureter, so puncture was done directing the stone and Middle calyx entered and stone was cleared.

Ø Laparoscopic left ureteric plication along with reimplantation was done using modified Lich gregoir method and Double ‘J’ stenting in the second sitting Picture 1- demonstrating megaureter Picture 2- LaparascopicUreteric reimplantation in progress

Post operative period was uneventful, drain was removed 12th postoperative day Double J stent removal done after 6 weeks.

DISCUSSION:
Megaureter or wide ureter, is an unusual congenital anomaly of the urinary tract. We define Megaureter is any ureter that is 8mm or greater in diameter (1). Normally ureteral diameter is about 5 mm, usually common on left side (2) and bilateral in 25% cases, predominant in males. It is classified into refluxing, obstructed, non obstructed and non refluxing types (Smith and stephens classification). Precise etiology is unclear, primary obstructive megaureter has an aperistaltic juxtavesical ureteral segment, maybe related to arrested development (Tanagho,1973). In this case it has presented with pain due to left renal calculus. In general, if the lumen of the ureter is significantly larger than 12 Fr it should be tapered prior to reimplantation. There are two techniques commonly employed for tapering by ureteral folding: (a) Starr plication and (b)
(a) Starr plication and (b) the Kaliscinski technique \(^{(1)}\). In this case the megaureter with renal stone is managed using minimally invasive methods offering the patient faster recovery and lesser pain score.

**CONCLUSION:**
Megaureter is any ureter that is dilated out of proportion to the rest of the urinary tract. Normally ureteral diameter is about 5 mm. Megaureter is ureter size more than 7-8 mm. It is predominant in males and left side most commonly affected\(^{(2)}\). It is classified into three groups. Here in this case, Primary obstructive megaureter which presented with symptoms due to left renal calculus. The case was managed by minimally invasive way, initially Percutaneous nephrolithotomy to treat left renal calculus followed by laparascopic ureteric reimplantation in the second sitting.

**REFERENCES:**
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